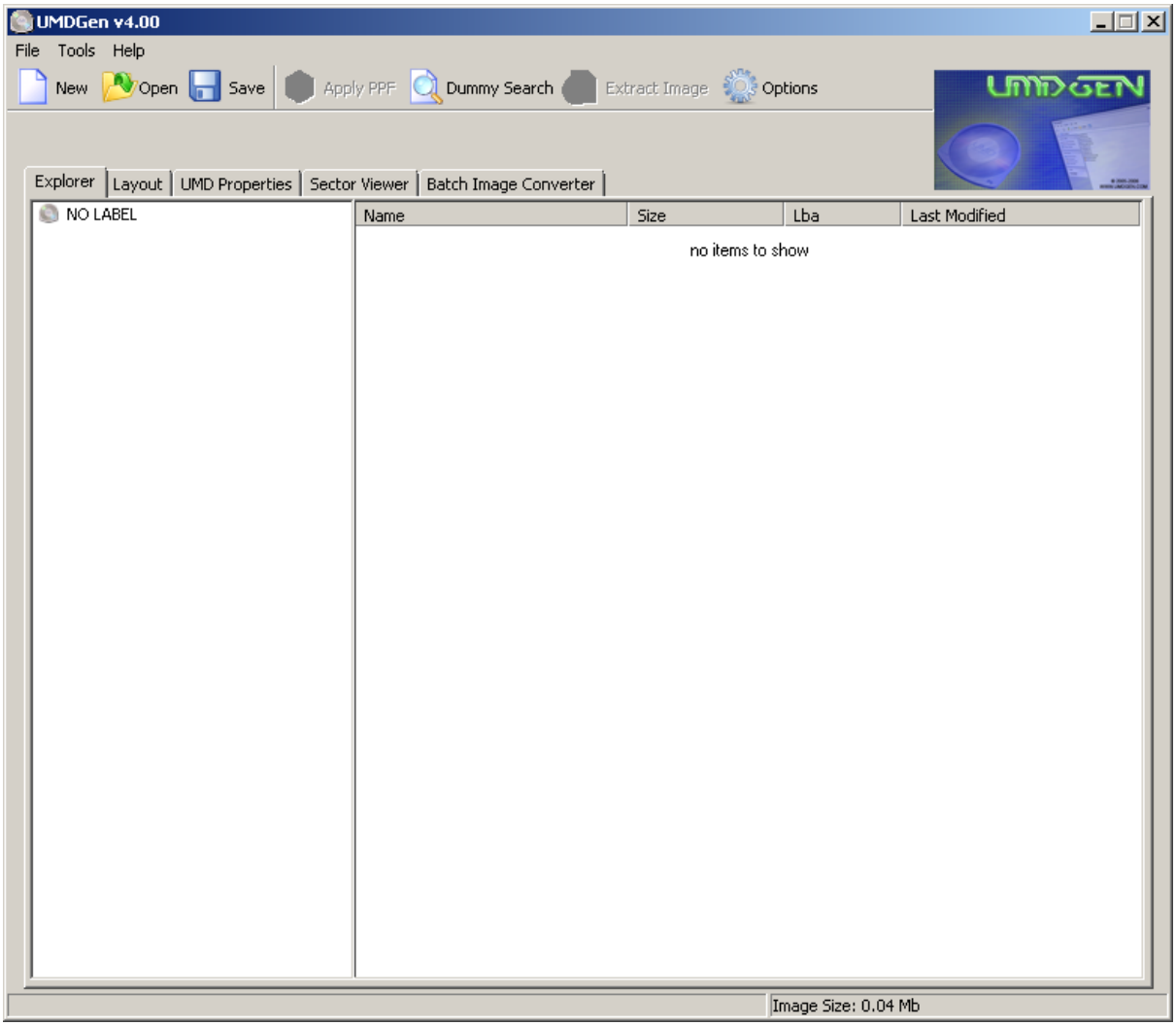
Generating the ISO file with UMDGen.

This chapter will describe how to build your ISO file so you can transfer it to and play it on your PSP.

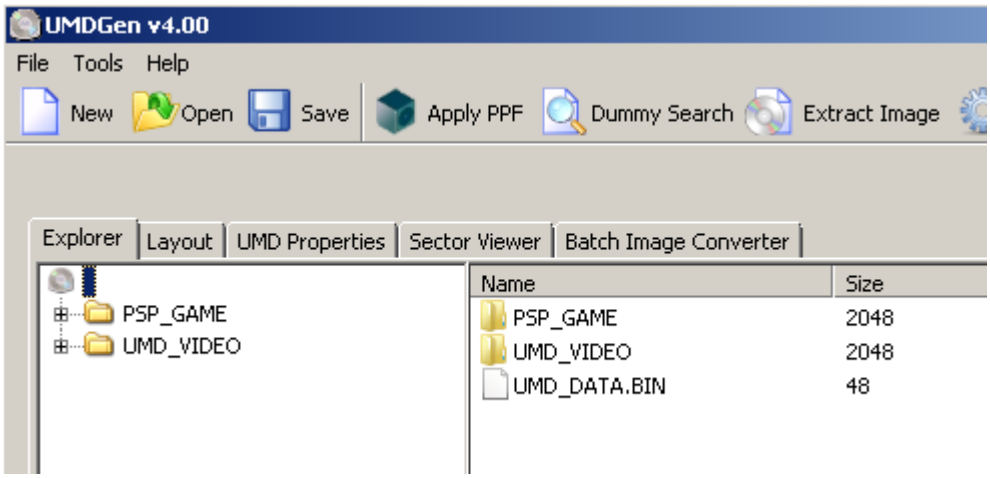
The tool we need for this is **UMDGen**. I will not explain the complete functionality of UMDGen, just the things you need for building your ISO file,

Instead of building an ISO file from scratch it is best to open an existing one and replace the necessary files. At least you will have the correct structure in place so no mistakes will be made there. All it comes down to then is replacing the correct files. Let's have a look at what files we find in an UMD ISO file. Start **UMDGen**, it opens with an empty screen.



Click **Open** and select and load an existing Video UMD ISO file.

The information in the ISO file will be loaded. Let's have a look at what we see.

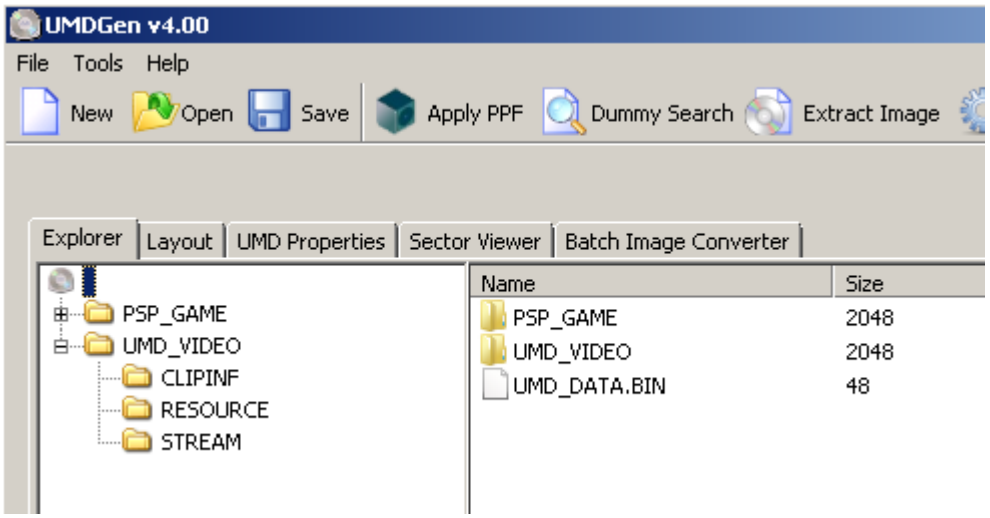


In the left pane we see the folder structure in the ISO file. We are currently in the root folder, which has no name. You can see the content of the root folder in the right pane. There are two subfolders (which are also visible in the left pane) and one file.

You can ignore the **PSP_GAME** folder, we don't need it. It sometimes contains a FW upgrade.

The **UMD_DATA.BIN** file contains the UMD disk ID. More info about this file in the chapter on making your UMD unique.

The folder we need is the **UMD_VIDEO** folder. Click on the **+** in front of it in the left pane to expand it.

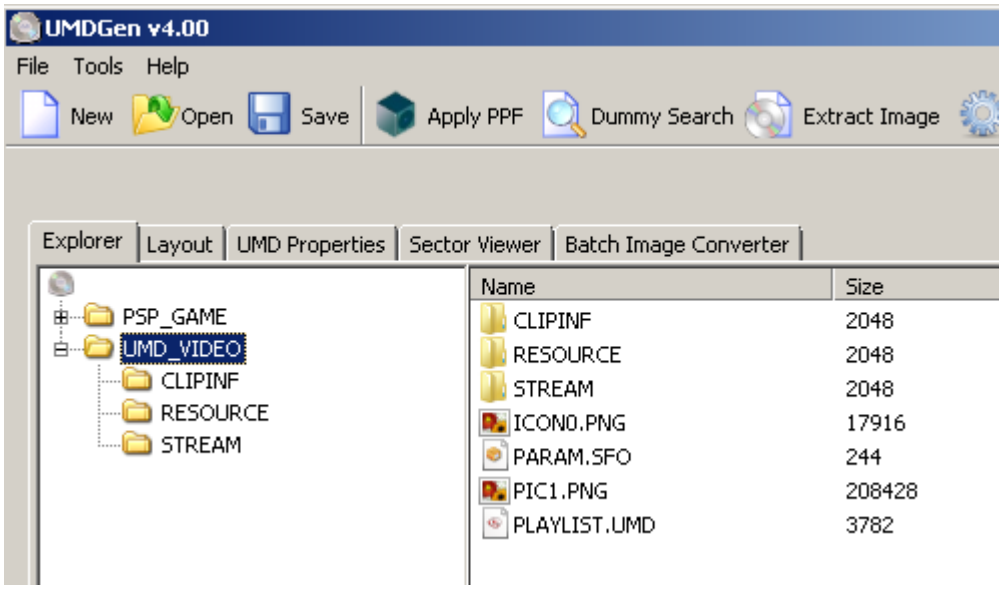


You see in contains three subfolders.

STREAM – Contains your media files, the MPS files that were the result of the encoding process.
CLIPINF – Contains the index files that belong to the MPS files. These are the CLP files that are also generated during the encoding process.
RESOURCE – Contains files that are essential for the menu and workflow of the UMD.

More information about that folder in the chapter on UMD Menus.

Now, before we look at the content of the **STREAM** and **CLIPINF** folder select the **UMD_VIDEO** folder in the left pane.



You can see that the UMD_VIDEO folder also contains a number of files, besides the 3 subfolders we have just seen. We will all need for our UMD.

ICON0.PNG – This is picture you see in the blinking icon when you load an UMD Video into your PSP.

Note: ICON0.PNG will only be shown when a file called **ICON1.PMF** does not exist in this folder. In this example that file is not present. ICON1.PMF contains video/audio for an animated icon. I will not describe how to make an ICON1.PMF file.

PIC1.PNG – This file contains the "wallpaper", the background that you see when first loading the UMD Video into your PSP.

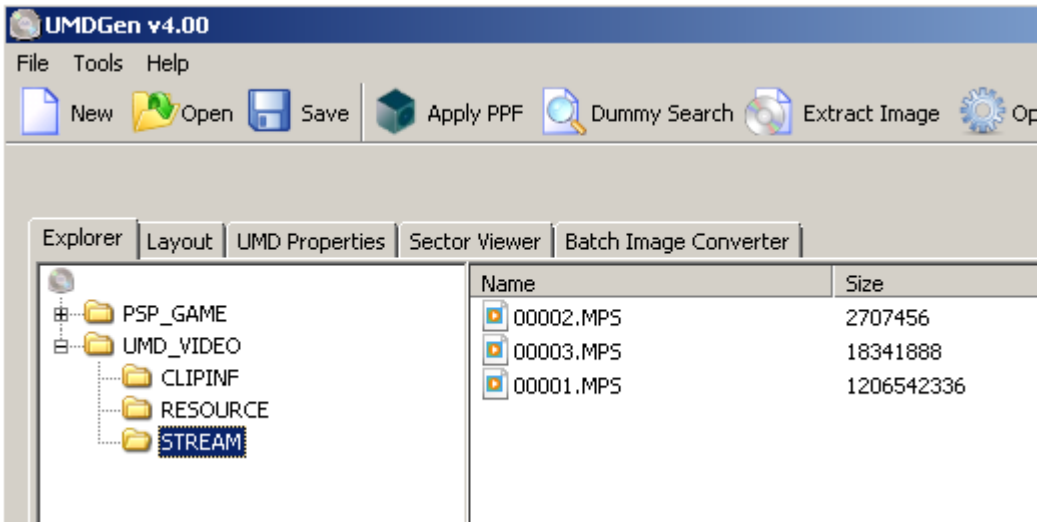
PARAM.SFO – This file contains the name of the UMD as it is visible in the XMB menu.

PLAYLIST.UMD – This file contains the playlist, chapters and timing information for your UMD.

All above files and **UMD_DATA.BIN** will be described in the chapter on UMD Presentation

Another file that might appear in this folder is **SND0.AT3**, which contains music that will be played while PIC1.PNG and ICON0.PNG (or ICON1.PMF) are being displayed. In this example this file is not present and I will not describe how to make it.

Now let us have a look at the STREAM folder as this is where the MPS that you created goes.
Click the **STREAM** folder.

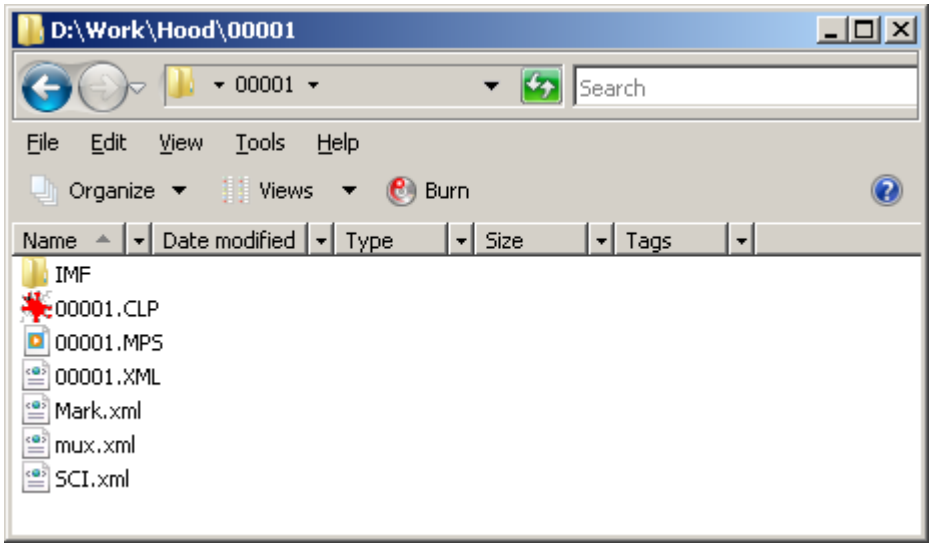


The STREAM folder can contain any number of MPS files, all media files will be here, your movie, your menu, your trailers, your extras. In above example we see there are three MPS files. We will have to replace one or several of these to make our own UMD. What you do need to know is which file contains what, so you know which file to replace.

There are two ways find out.

1. Extract the MPS file and load it into UMD Stream Viewer (see separate chapter on how to do this).
2. Look in the PLAYLIST.UMD file (see separate chapter for more info).

There's one general rule. The largest file will contain your movie, in this case **00001.MPS**.
Now, do you remember the output of our encoding process? Have a look.

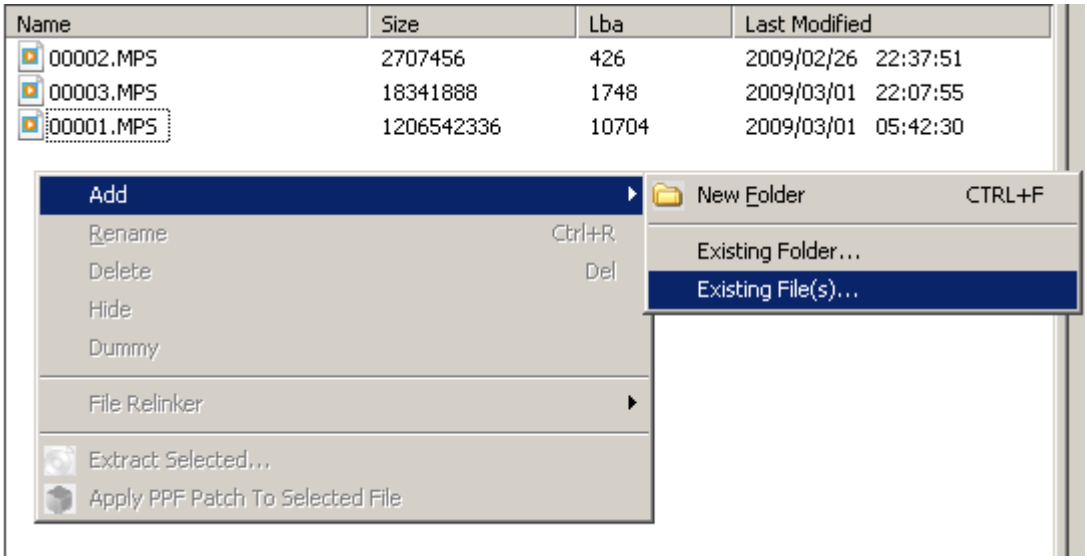


You see we have a **00001.MPS** file as well, which contains our movie!

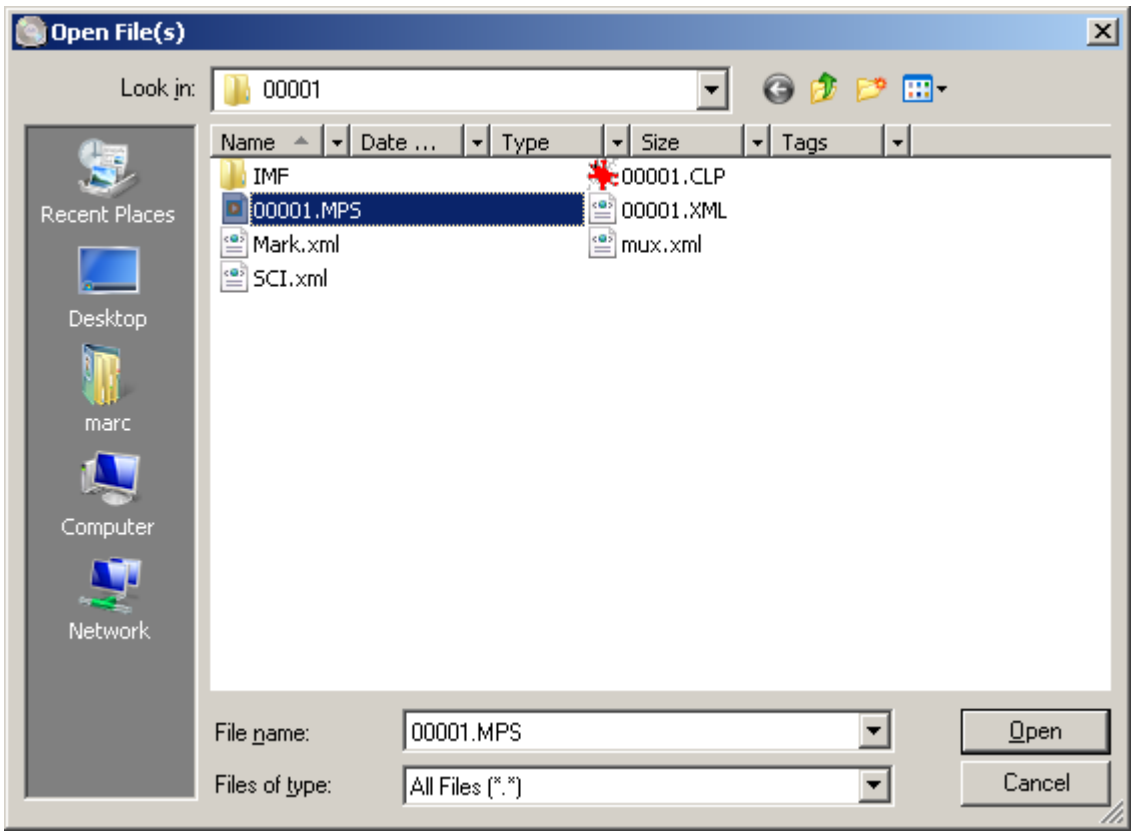
Basically in 99.5% of all cases 00001.MPS will contain the actual movie and we can replace this file with our own encoded movie (with the same filename – do not rename the files!).

In my example 00002.MPS contains the studio logo (here Momentum Pictures) and 00003.MPS contains the background menu. More info about this in the chapter on menus.

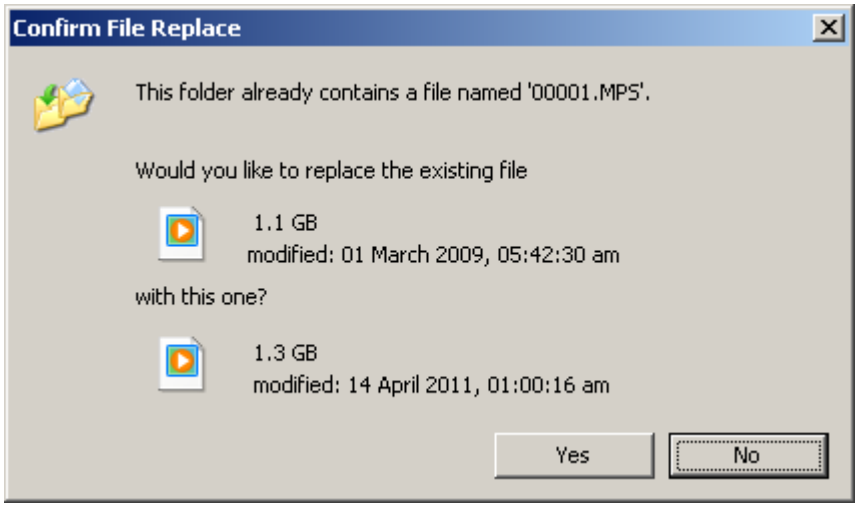
So, let's replace 00001.MPS in the ISO with our own 00001.MPS file. To do so simply **right-click** in the **right pane**, select **Add** and then **Existing File(s)…**



Navigate to your own 00001.MPS file, select it then click **Open**.



It will find that there is a file with the same name and warns you.



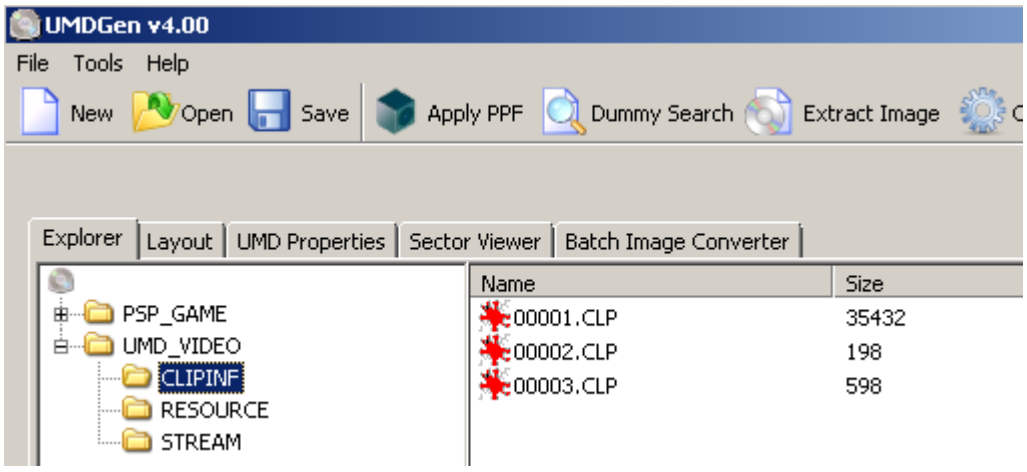
Confirm replacement by clicking **Yes**.

It goes back to the main window and you can see from the date that your file is now loaded.

Name	Size	Lba	Last Modified
00002.MPS	2707456	426	2009/02/26 22:37:51
00003.MPS	18341888	1748	2009/03/01 22:07:55
00001.MPS	1381371904	10704	2011/04/14 01:00:16

Now we replaced the 00001.MPS we also have to replace the related .CLP file as it contains index data for the MPS file.

Click on the **CLIPINFO** folder in the **left pane**. The content will show again in the right pane.



You see here three files as well, 00001.CLP, 00002.CLP and 00003.CLP. This is no coincidence as these CLP files are directly linked to the corresponding MPS files with the same name. We just replaced 00001.MPS, so now we *__have__* to replace 00001.CLP as well with our own.

This works identical to how we replaced the 00001.MPS file.

Right-click in the **right pane**, select **Add** and then **Existing File(s)…**
Find your **00001.CLP** file, **open** it and choose **Yes** to replace the existing file.

Again you can notice the replacement at the changed date.

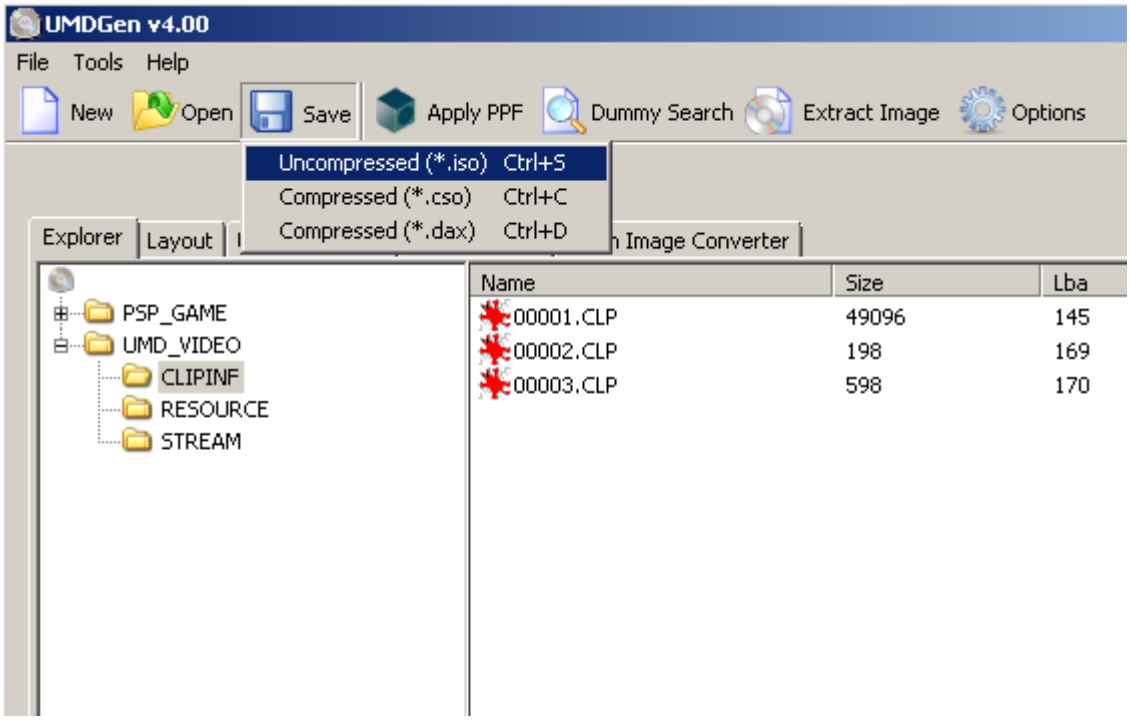
Name	Size	Lba	Last Modified
00001.CLP	49096	145	2011/04/14 01:00:20
00002.CLP	198	169	2009/02/26 22:39:12
00003.CLP	598	170	2009/03/01 22:07:56

Note that the order in which these files are listed doesn't matter. Here we see 00001.CLP on top while in the STREAM folder we saw 00001.MPS listed at the bottom. This is no problem.

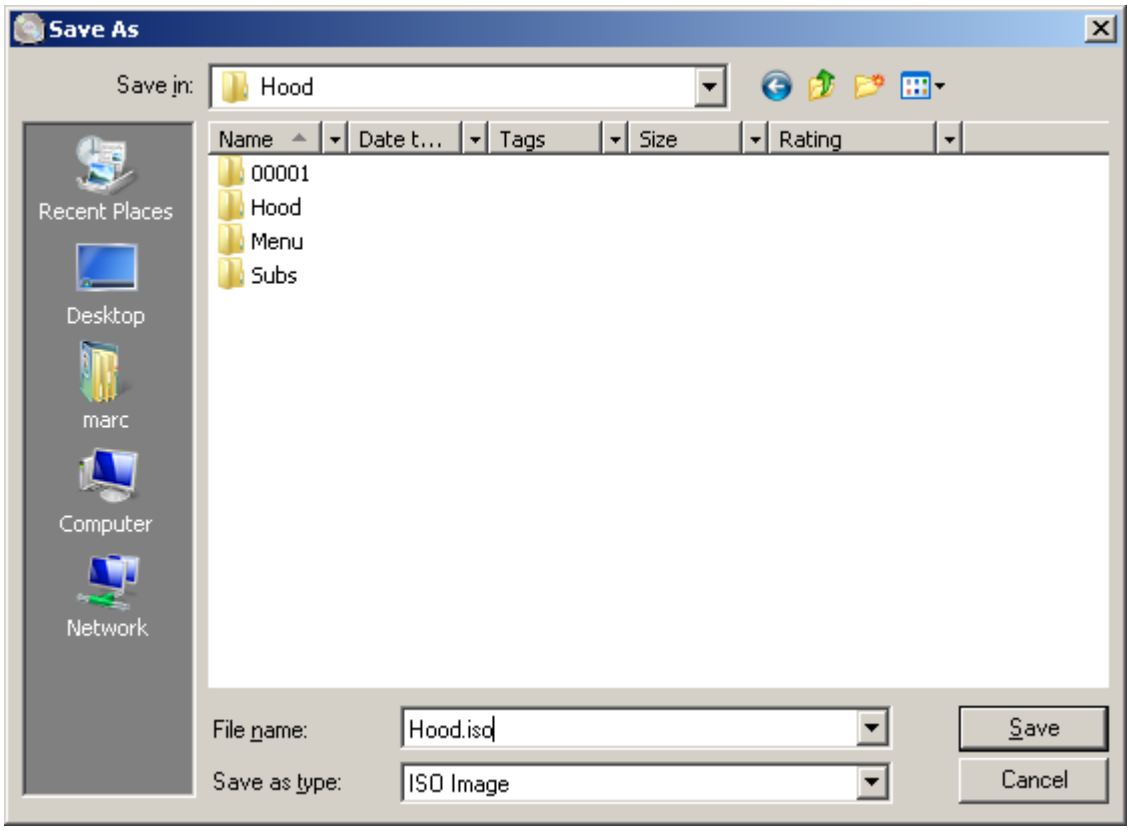
Now we have replaced the main feature in the ISO. You can repeat the same steps for any other files that you need to replace, once you have your own versions. This goes as well for the other files we saw earlier. Just remember that when you replace a MPS file you ***must*** also replace the corresponding CLP file, and vice versa.

Now it's time to save our new ISO.

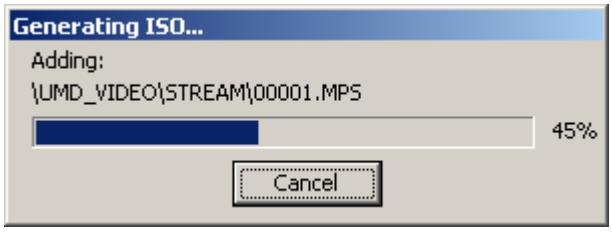
Select **Save** and then **Uncompressed (*.iso)** from the menu.



It will open the **Save As** window where you can select you destination folder and your filename.
For this example I will save as **Hood.iso**.



Click **Save** to start generating your ISO.



When this window closes you can close UMDGen. The created ISO file can be loaded into your PSP.